

A FLUID DYNAMIC BEARING MOTOR
OPTIMIZED FOR RADIAL STIFFNESS AND POWER CONSUMPTION

ABSTRACT OF THE DISCLOSURE

A variable-gap fluid dynamic bearing motor assembly is described. In one embodiment, the assembly includes a hub configured to rotate about a rotational axis and to support at least one disc. The assembly also includes a first member attached to the hub and configured to rotate about the rotational axis and a second member. A first fluid dynamic journal bearing having a first bearing gap and a second fluid dynamic journal bearing having a second bearing gap are disposed between the first member and the second member. The bearing gaps are configured such that the second bearing gap is larger than the first bearing gap. Bearing fluid disposed within the first fluid dynamic journal bearing and the second fluid dynamic journal bearing to support the relative rotation of the first member and the second member.